

AMENDMENTS TO THE CLAIMS

1. – 8. (Cancelled)

9. (Currently Amended) A layer, wherein the layer is obtained by thermal treatment from an aqueous dispersion applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and the titanium dioxide content of the powder is ~~between~~ ranges from 2 ~~and to~~ 20 wt.%.

10. (Currently Amended) The layer as claimed in claim 9, wherein the thickness of the layer is ~~between~~ ranges from 100 nm ~~and to~~ 1 mm.

11. (Currently Amended) The layer as claimed in claim 9, wherein the thickness of the layer is ~~between~~ ranges from 1 ~~pm and~~ μm to 50 μm.

12. (Currently Amended) The layer as claimed in claim 9, wherein the thickness of the layer is ~~between~~ ranges from 5 ~~pm and~~ μm to 15 ~~pm~~ μm.

13. (Currently Amended) The layer as claimed in claim 9, wherein the BET surface area of the powder is ~~between~~ ranges from 5 ~~and to~~ 500 m<sup>2</sup>/g.

14. (Currently Amended) The layer as claimed in claim 9, wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 130 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 90 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area is ~~between~~ ranges from 40:60 ~~and to~~ 99.5:0.5.

15. (Currently Amended) The layer as claimed in claim 14, wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 170 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 70 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area is ~~between~~ ranges from 40:60 ~~and to~~ 99.5:0.5.

16. (Previously Presented) The layer as claimed in claim 9, wherein the substrate is selected from the group consisting of borosilicate glass, silica glass, glass ceramic, and a material with a very low coefficient of expansion.

17. (Previously Presented) The layer as claimed in claim 9, further comprising less than 0.5 wt.% of impurities.

18. (Previously Presented) A process for preparing the layer as claimed in claim 9, comprising applying a dispersion containing a silicon/titanium mixed oxide powder to a substrate, and thermal treatment sintering the dispersion applied to the substrate.

19. (Currently Amended) The process as claimed in claim 18, further comprising preparing the dispersion by flame hydrolyzing a silicon/titanium mixed oxide powder, wherein the proportion of powder ~~is between~~ ranges from 0.1 ~~and to~~ 60 wt.% in the dispersion.

20. (Previously Presented) A method comprising coating a material with a layer as claimed in claim 9, wherein said material is selected from the group consisting of an ultra-low expansion material a photocatalytic material, a self-cleaning mirror, a superhydrophilic constituent, a lens, a container for a gas and a container for a liquid.

21. (Currently Amended) A layer, wherein the layer is obtained by thermal treatment from an aqueous dispersion applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 130 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 90 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ~~is between~~ ranges from 40:60 ~~and to~~ 99.5:0.5.

22. (Currently Amended) The layer as claimed in claim 21, wherein the thickness of the layer ~~is between~~ ranges from 100 nm ~~and to~~ 1 mm.

23. (Currently Amended) The layer as claimed in claim 21, wherein the thickness of the layer ~~is between~~ ranges from 1 ~~pm and~~ μm to 50 μm.

24. (Currently Amended) The layer as claimed in claim 21, wherein the thickness of the layer ~~is between~~ ranges from 5 ~~pm and~~ μm to 15 ~~pm~~ μm.

25. (Currently Amended) The layer as claimed in claim 21, wherein the BET surface area of the powder ~~is between~~ ranges from 5 ~~and to~~ 500 m<sup>2</sup>/g.

26. (Currently Amended) The layer as claimed in claim 21, wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 170 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 70 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ~~is between~~ ranges from 40:60 ~~and to~~ 99.5:0.5.

27. (Currently Amended) The layer as claimed in claim 21, wherein the titanium dioxide content of the powder ~~is between~~ ranges from 0.1 ~~and to~~ 99.9 wt.%.

28. (Currently Amended) The layer as claimed in claim 21, wherein the titanium dioxide content of the powder ~~is between~~ ranges from 2 ~~and to~~ 20 wt.%.

29. (Previously Presented) The layer as claimed in claim 21, wherein the substrate is selected from the group consisting of borosilicate glass, silica glass, glass ceramic, and a material with a very low coefficient of expansion.

30. (Previously Presented) The layer as claimed in claim 21, further comprising less than 0.5 wt.% of impurities.

31. (Previously Presented) A process for preparing the layer as claimed in claim 21, comprising applying a dispersion containing a silicon/titanium mixed oxide powder to a substrate, and thermal treatment sintering the dispersion applied to the substrate.

32. (Currently Amended) The process as claimed in claim 31, further comprising preparing the dispersion by flame hydrolyzing a silicon/titanium mixed oxide powder, wherein the proportion of powder ~~is between~~ ranges from 0.1 ~~and to~~ 60 wt.% in the dispersion.

33. (Previously Presented) A method comprising coating a material with a layer as claimed in claim 21, wherein said material is selected from the group consisting of an ultra-low expansion material a photocatalytic material, a self-cleaning mirror, a superhydrophilic constituent, a lens, a container for a gas and a container for a liquid.

SUPPORT FOR THE AMENDMENT

Claims 9-15, 19, 21-28, and 32 have been amended.

Claims 9-15, 19, 21-28, and 32 have been amended to replace the phrase “is between [X] and [Y]” with “ranges from [X] to [Y].” Support for this amendment is provided throughout the specification as filed, as well as the previously pending claims. Further, Claims 11, 12, 23, and 24 have been amended to replace “pm” with “ $\mu\text{m}$ .” Support for this amendment is provided by page 4, lines 1-3 of the English translation.

No new matter is believed to have been added by these amendments.